

SECTIONAL TABLE WITH GUSSETS

BACKGROUND OF THE INVENTION

Field of the Invention

[01] The present invention relates to a sectional table with gussets, and more particularly, to a sectional table with gussets wherein each gusset is made of a plastic material and is detachably mounted to a channel frame, thereby omitting a drawing process for the channel frame and a welding process of the gussets with the channel frame, which gives some advantages that manufacturing costs substantially decrease and workability and efficiency in assembling are substantially improved.

Background of the Related Art

[02] In general, a table is a general term of furniture for dining, serving, meeting, working, etc. It allows various goods or foodstuffs to be put thereon and helps a separate work to be efficiently conducted. Such a table is largely classified into two types of tables depending upon the structure thereof, one being a fixed table in which table legs thereof are directly fixed to the underside of a table top plate thereof, and the

other being a sectional table in which table legs thereof can be separated from and assembled with a table top plate thereof.

[03] Recently, to achieve mass production and improvement of efficiency in assembling a table, a sectional table in which the table top plate and the table legs are assembled together by using various types of connecting members is more widely used, relatively to others. A gusset is one of the connecting members.

[04] A conventional sectional table with gussets is disclosed in Korean Utility Model application No. 2002-18194 that is issued to the same applicant as in this invention, an explanation of which will be discussed with reference to FIG. 1.

[05] As shown in FIG. 1, the conventional sectional table with gussets includes: an inverted hat-shaped channel frame 20 having cylindrical parts 22 formed on a central portion thereof through a deep-drawing process and flanges 24 and 24' formed at both ends thereof to be fixedly secured to the underside of a table top plate 10; substantially cylindrical gussets 30 inserted into the cylindrical parts 22 of the channel frame 20 at the upper ends thereof to be fixedly secured to the channel frame 20 by welds; and table legs 40 fixedly inserted into the openings of the gussets 30.

[06] The cylindrical parts 22 of the channel frame 20 may be varied depending upon the size and shape of the gusset 30, and

the flanges 24 and 24' include an adhering member 26 for good coupling with the underside of the table top plate 10 on the top surfaces thereof.

[07] Each of the gussets 30 is provided with an adjusting screw 60 on a circumferential surface thereof to freely adjust the height of the table legs 40 at need.

[08] On the other hand, the formation of cross-shaped openings at the top ends of the cylindrical parts 22 is to prevent each cylindrical part 22 from being deformed when welded portions 28 are tack-welded.

[09] However, the aforementioned conventional sectional table with gussets has some shortcomings as follows:

[10] In order to form the cylindrical parts 22 at the central portion of the channel frame 20, it is necessary to conduct a separate drawing process, and the gussets 30 should be separately welded to the channel frame 20, which makes the working process more complicated. Furthermore, the manufacturing costs increase.

SUMMARY OF THE INVENTION

[11] Accordingly, the present invention has been made in view of the above problem, and it is an object of the present invention is to provide a sectional table with gussets wherein

each gusset is made of a plastic material and is detachably mounted to a channel frame, thereby omitting a drawing process for the channel frame and a welding process of the gussets with the channel frame, which gives some advantages that manufacturing costs substantially decrease and workability and efficiency in assembling are substantially improved.

To achieve the above object, according to the present invention, there is provided a sectional table with gussets, including: a channel frame having a bottom portion provided with a through hole formed thereon, a pair of side walls vertically extending from both ends of the bottom portion in such a manner as to face each other to define an insertion groove therebetween, and flange portions horizontally extending outwardly from top ends of the pair of side walls so as to be coupled to the underside of a table top plate; a table leg having a predetermined length and inserted into the through hole formed on the bottom portion of the channel frame; and a gusset fitted into the insertion groove of the channel frame to be detachably mounted onto the pair of side walls, the gusset having an insertion recess formed on the underside thereof in a predetermined depth for inserting the top portion of the table leg thereto.

BRIEF DESCRIPTION OF THE DRAWINGS

[12] Further objects and advantages of the invention can be more fully understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

[13] FIG.1 is a sectional view of a conventional sectional table with gussets;

[14] FIG. 2 is an exploded perspective view of a sectional table with gussets according to an embodiment of the present invention;

[15] FIG. 3 is a sectional view of the sectional table in FIG. 2;

[16] FIG. 4 is an exploded perspective view of a sectional table with gussets according to another embodiment of the present invention;

[17] FIG. 5 is a sectional view of the sectional table in FIG. 4; and

[18] FIG. 6 is a cross sectional view of the gusset in FIG. 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[19] Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings.

[20] FIG. 2 is an exploded perspective view of a sectional table with gussets according to an embodiment of the present invention, and FIG. 3 is a sectional view of the sectional table in FIG. 2.

[21] As shown, a sectional table with gussets according to the present invention includes a table top plate 100, a channel frame 200, a table leg 300, and a gusset 400.

[22] The channel frame 200 has a bottom portion 210 provided with a through hole 211 thereon, a pair of side walls 220 vertically extending from both ends of the bottom portion in such a manner as to face each other to define an insertion groove therebetween, and flange portions 221 horizontally extending outwardly from top ends of the pair of side walls 220 so as to be coupled to the underside of a table top plate 100.

[23] The gusset 400 is fitted into the insertion groove 201 of the channel frame 200 to be detachably mounted onto the pair of side walls 220, and has an insertion recess 441 formed on the underside thereof in a predetermined depth for inserting the top portion of the table leg 300 thereto. The gusset 400 is made of a plastic material.

[24] In the meanwhile, the gusset 400 may be formed of an elastically hard rubber material as well as a plastic material.

[25] The gusset 400 has locking protrusions 410 formed on the outer surfaces thereof to be opposite to each other, and the channel frame 200 has locking grooves 420 formed on the pair of side walls 220 of the channel frame for allowing the locking protrusions 410 to be snap-fitted thereto.

[26] On the other hand, two or more locking protrusions 410 may be formed on the outer surface of the gusset 400, as shown in FIG. 4, which allows a coupling force between the gusset 400 and the channel frame 200 to be more strengthened. Therefore, two or more locking grooves 420 are also formed on the channel frame 200 to correspond to the number of locking protrusions 410.

[27] The gusset 400 includes a generally square frame member 430 vertically penetrated therethrough; a support member 440 disposed within the frame member 430 and having the insertion recess 441 formed on the underside thereof; and a plurality of connecting members 450 extending radially outwardly from the outer periphery of the support member 440 for connecting the support member to the frame member 430.

[28] In this case, the plurality of connecting members 450 connecting the support member 440 to the frame member 430 serve to flexibly move the support member 440 when the table leg 300 is inserted into the insertion recess 441.

[29] In other words, the reason for this is that there is a space portion S between adjacent two adjacent connecting members 450.

[30] The support member 440 further includes a guide ring 460 formed on the underside thereof in such a manner as to be protruded from the underside thereof, for guiding the table leg 300 into the insertion recess 411 of the support member through the through hole 211 formed on the bottom portion 210 of the channel frame 200.

[31] In another embodiment of the present invention as shown in FIGS. 5 and 6, the insertion recess 441 of the support member 440 comprises a plurality of protruding ribs 442 formed on the inner peripheral surface thereof in upward and downward directions at regular intervals, such that movement of the table leg 300 is prevented.

[32] As a result, the table leg 300 is fixedly secured, without any movement to the left or right.

[33] Now, an explanation of the assembling process of the sectional table with gussets according to the preferred embodiment of the present invention will be given hereinafter.

[34] First of all, the gusset 400 is secured to the channel frame 200 in such a manner that it is inserted into the insertion grooves 201 of the channel frame 200, while the locking

protrusions 410 are locked to the locking grooves 420 of the side walls 220.

[35] At this time, the guide ring 460 of the gusset 400 is inserted into the through hole 211 formed on the bottom portion 210 of the channel frame 200.

[36] After that, the table leg 300 is inserted into the insertion recess 441 of the gusset 400.

[37] Then, the table top plate 100 is placed on the flange portion 221 of the channel frame 200 and then secured to the top surface of the flange portion 221.

[38] On the other hand, a disassembling process of the sectional table with gussets according to the present invention is carried out in the reverse order to the assembling process as mentioned above, but at this time, it should be noted that the gusset 400 is carefully detached from the channel frame 200.

[39] In more detail, the pair of side walls 220 of the channel frame 200 are forcibly pulled outwardly, and then, the gusset 400 is detached from the insertion groove 201 of the channel frame 200.

[40] As clearly described above, there is provided the sectional table with gussets according to the present invention wherein the gusset is made of a plastic material and is detachably mounted to a channel frame, thereby omitting a drawing

process for the channel frame and a welding process of the gussets with the channel frame, which gives some advantages that manufacturing costs substantially decrease and workability and efficiency in assembling are substantially improved.

[41] While the present invention has been described with reference to the particular illustrative embodiments, it is not to be restricted by the embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can change or modify the embodiments without departing from the scope and spirit of the present invention.